

Susan E Owen

EDUCATION:

1998: *Ph. D.*, Geophysics, Stanford University.
1992: *B.A.*, Physics, Harvard-Radcliffe University.

PROFESSIONAL EXPERIENCE:

2004–present: Research Scientist
 Jet Propulsion Laboratory, Pasadena, CA
 • Principal Investigator/Project Lead for Advanced Rapid Imaging and Analysis team (2010-present)
 • Deputy Applications Lead for NISAR mission (2012-present)
 • Discipline Program Manager for Solid Earth Science (2015-present)
 • Group Supervisor, Earth Surface and Interior Group

2004-2006: Assistant Research Professor, Geophysics
 Department of Earth Sciences, University of Southern California, LA

1999–2004: Assistant Professor of Geophysics
 Department of Earth Sciences, University of Southern California, LA

1998-1999: Miller Post-Doctoral Research Fellow
 Department of Geology and Geophysics, U.C. Berkeley

1992-1993: Research Geophysicist, U.S. Geological Survey, Menlo Park, CA

PROFESSIONAL MEMBERSHIP & SERVICE:

AGU Geodesy Section President-Elect, 2015
EarthScope Steering Committee, Cyberinfrastructure Committee Chair (2013-present)
UNAVCO Nominations Committee (2011-12)
UNAVCO Board of Directors (2007-10): Vice-Chair (2007), Chair (2008-9)
Guest Lecturer, Caltech, Tectonic Geodesy Class (Prof. Mark Simons) (2011, 2013)
Geodesy Section Secretary, American Geophysical Union (2005-7)
Member, Plate Boundary Observatory (PBO) Standing Committee (2002-6)
Co-convener, UNAVCO Volcano Geodesy Workshop (1999)

SELECTED AWARDS

NASA Group Achievement Award, 2014
Research Poster Conference Award from JPL OCS and OCT (2011, 2013)
Zumberge Fellow, USC (1999-2000)
Lieberman Fellowship, Stanford University (1996-7)

RECENT INVITED PRESENTATIONS:

“GNSS H2O: Expanding Reflection Research to the Global GNSS Network For Measuring the Water Cycle”, Invited Talk, 2016 IGS Workshop, February 2016, Sydney, Australia

“The Advanced Rapid Imaging and Analysis (ARI) Project’s Response to the April 25, 2015 M7.8 Nepal Earthquake: Rapid Measurements and Models for Science and Situational Awareness”, Invited Talk, Fall AGU Meeting, December 2015, San Francisco

- “Using SAR and GPS for Hazard Management and Response: Progress and Examples from the Advanced Rapid Imaging and Analysis (ARIA) Project”, Invited Talk, Fall AGU Meeting, December 2014, San Francisco
- “JPL Response to August 24, 2014 South Napa Earthquake”, California Seismic Safety Commission, October, 2014.
- Keynote Speaker for “International Symposium on Geodesy for Earthquake and Natural Hazards”, Miyagi, Japan, July 2014
- Keynote Speaker for “Seismology from Space: Geodetic Observations and Early Warning of Earthquakes”, Royal Astronomical Society, London, May 2014.
- Speaker for Plenary Session “Mixing it up: Geodesy, seismology and real-time monitoring: seismic data; GPS & InSAR, High-rate GPS”, UNAVCO Science Workshop, Broomfield, CO, March 2014.
- Panel Speaker/Presentation for “Saving More Lives through Science and Technology”, National Homeland Security Conference, Los Angeles, June 2013
- “Geodetic Imaging Products for Earthquake Modeling and Response from the JPL/Caltech Advanced Rapid Imaging and Analysis (ARIA) Project, Invited Talk, Seismological Society of America Meeting, Salt Lake City, April 2013

REPORTS:

- 2014 NISAR Applications Workshop: Linking Mission Goals to Societal Benefit. Workshop Report, Co-Chair of Writing Committee, May 2015.
- Davis, J., Y. Fialko, W.E. Holt, M.M. Miller, S.E. Owen, M.E. Pritchard (Eds.), “A Foundation for Innovation: Grand Challenges in Geodesy, Report from the Long-Range Science Goals for Geodesy Community Workshop, UNAVCO, Boulder, Colorado, 2012, 79 pp.
- Williams, M.L., K.M. Fischer, J.T. Freymueller, B.Tikoff, A.M.Tréhu, and others, “Unlocking the Secrets of the North American Continent: An EarthScope Science Plan for 2010-2020, February, 2010, 78 pp.

REFERRED PUBLICATIONS:

- Martens, H.R., M. Simons, S. Owen, L. Rivera, “Observations of Ocean Tidal Load Response in South America from Sub-daily GPS Positions”, Geophys. J. Intl., accepted for publication February 2016.
- Duputel, Z., Jiang, J., Jolivet, R., Simons, M., Rivera, L., Ampuero, J.P., Riel, B., Owen, S.E., Moore, A.W., Samsonov, S.V. and Ortega Culaciati, F., 2015. The Iquique earthquake sequence of April 2014: Bayesian modeling accounting for prediction uncertainty. Geophysical Research Letters, 42(19), pp.7949-7957.
- Yun, S.H., Hudnut, K., Owen, S., Webb, F., Simons, M., Sacco, P., Gurrola, E., Manipon, G., Liang, C., Fielding, E. and Milillo, P., 2015. Rapid Damage Mapping for the 2015 Mw 7.8 Gorkha Earthquake Using Synthetic Aperture Radar Data from COSMO-SkyMed and ALOS-2 Satellites. Seismological Research Letters, 86(6), pp.1549-1556.
- Galetzka, J., D. Melgar, J. F. Genrich, J. Geng, S. Owen, E. O. Lindsey, X. Xu et al. "Slip pulse and resonance of the Kathmandu basin during the 2015 Gorkha earthquake, Nepal." Science 349, no. 6252 (2015): 1091-1095.
- Liu, Z., A W. Moore, S. Owen, “Recurrent slow slip event reveals the interaction with seismic slow earthquakes and disruption from large earthquake” Geophysical Journal International 2015 202 (3): 1555-1565, doi: 10.1093/gji/ggv238.

- Minson, Sarah E., Benjamin A. Brooks, Craig L. Glennie, Jessica R. Murray, John O. Langbein, Susan E. Owen, Thomas H. Heaton, Robert A. Iannucci, and Darren L. Hauser. "Crowdsourced earthquake early warning." *Science Advances* 1, no. 3 (2015): e1500036.
- Fielding, E., M. Simons, S. Owen, P. Lundgren, H. Hua, P. Agram, Z. Liu et al., Rapid Imaging of Earthquake Ruptures with Combined Geodetic and Seismic Analysis. *Procedia Technology* 16 (2014): 876-885.
- Liu, Z., Owen, S., & Moore, A., Rapid Estimate and Modeling of Permanent Coseismic Displacements for Large Earthquakes Using High-Rate Global Positioning System Data. *Seism. Res. Lett.*, 85(2), 284-294, 2014.
- Protti, Marino, Victor González, Andrew V. Newman, Timothy H. Dixon, Susan Y. Schwartz, Jeffrey S. Marshall, Lujia Feng, Jacob I. Walter, Rocco Malervisi, and Susan E. Owen. "Nicoya earthquake rupture anticipated by geodetic measurement of the locked plate interface." *Nature Geoscience* 7, no. 2 (2014): 117-121.
- Minson, S. E., M. Simons, J. L. Beck, F. Ortega, J. Jiang, S. E. Owen, A. W. Moore, A. Inbal, and A. Sladen. "Bayesian inversion for finite fault earthquake source models-II: the 2011 great Tohoku-oki, Japan earthquake." *Geophysical Journal International* 198, no. 2 (2014): 922-940.
- Fielding, E. J., Lundgren, P. R., Taymaz, T., Yolsal- Çevikbilen, S., & Owen, S. E., Fault-Slip Source Models for the 2011 M 7.1 Van Earthquake in Turkey from SAR Interferometry, Pixel Offset Tracking, GPS, and Seismic Waveform Analysis. *Seismological Research Letters*, 84(4), 579-593, 2013.
- Yue, H., Lay, T., Schwartz, S., Rivera, L., Protti, M., Dixon, T., Owen, S. The 5 September 2012 Costa Rica Mw 7.6 earthquake rupture process from joint inversion of high-rate GPS, strong-motion, and teleseismic P wave data and its relationship to adjacent plate boundary interface properties, *Journal of Geophysical Research: Solid Earth*, revisions submitted, 2013.
- Marshall, S., Funning, G., Owen, S., Fault Slip Rates and Interseismic Deformation in the Western Transverse Ranges, California, *J. Geophys. Res.*, Vol. 118, doi:10.1002/jgrb.50312, 2013.
- Wei, S., Helmberger, D., Owen, S., Graves, R. W., Hudnut, K. W., & Fielding, E. J., Complementary slip distributions of the largest earthquakes in the 2012 Brawley swarm, Imperial Valley, California, *Geophys. Res. Lett.*, Vol. 40, 5, pp 847-852, 2013.
- Lundgren, P., Poland, M., Miklius, A., Orr, T., Yun, S. H., Fielding, E., Liu, Z., Tanaka, A., Szeliga, W., Hensley, S., & Owen, S., Evolution of dike opening during the March 2011 Kamoamoa fissure eruption, Kīlauea Volcano, Hawai‘i. *J. Geophys. Res.*, 118, 897–914, doi:10.1002/jgrb.50108, 2013.
- Pritchard, M., Owen, S., Anandakrishnan, S., Holt, W., Bennett, R., La Femina, P., P. Jansma, I. MacGregor, C. Raymond, S. Schwartz, S. Stein, M. Miller. Open access to geophysical data sets requires community responsibility. *Eos, Transactions American Geophysical Union*, 93(26), 243-243, 2012.
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- Liu, Z., S. Owen, D. Dong, P. Lundgren, F. Webb, E. Hetland and M. Simons, Integration of transient strain events with models of plate coupling and areas of great earthquakes in southwest Japan, *Geophys. J. Int.*, doi: 10.1111/j.1365-246X.2010.04599.x0371-9, 2010.
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Owen, S., P. Segall, M. Lisowski, A. Miklius, M. Murray, M. Bevis, J. Foster, The January 30th Eruptive Event on Kilauea as Monitored by Continuous GPS, *Geophysical Research Letters*, Vol. 27, No. 17, p. 2757-60, 2000.

Owen, S., P. Segall, M. Lisowski, A. Miklius, R. Denlinger, J. Freymueller, T. Arnadottir, M. Sako, Rapid deformation of Kilauea volcano: GPS measurements between 1990 and 1996, *Journal of Geophysical Research*, Vol., 105, No. B8, p. 18,983-98, 2000.

Owen, S., P. Segall, J. Freymueller, A. Miklius, R. Denlinger, T. Arnadottir, M. Sako, R. Bürgmann, Rapid Deformation of the South Flank of Kilauea Volcano, Hawaii, *Science*, Vol. 267, No 5205, p. 1328-32, 1995.